

[Document Title] Abstract

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[Object]

It is an object of the present invention to provide a laser irradiation apparatus which can drastically broaden the area of the beam spot and which can decrease the proportion of the region having inferior crystallinity. In addition, it is an object of the present invention to provide a laser irradiation apparatus which can enhance the throughput while using the continuous wave laser light. Furthermore, it is an object of the present invention to provide a method for manufacturing a semiconductor device and a laser irradiation method using the laser irradiation apparatus.

[Solution]

The second laser light of a continuous wave oscillation is irradiated to the region melted by the first laser light of a pulsed oscillation having the harmonic. Specifically, the first laser light has a wavelength not longer than that of visible light (830 nm, preferably not more than 780 nm). The absorption coefficient of the second laser light to the semiconductor film considerably increases because the semiconductor film is melted by the first laser light, and therefore the second laser light becomes easy to be absorbed in the semiconductor film.

[Representative Figure] FIG. 2